Patent claims

1. An intrinsically stable shirred tubular single-layer or multilayer food casing, which essentially consists of synthetic polymers and has, without a net or reinforcing packaging, sufficient intrinsic stability to be able to be processed on fully automatic stuffing machines.

2. The shirred food casing as claimed in claim 1, wherein it is compressed in a ratio of 100:1 or more, preferably 120:1 to 500:1.

3. The shirred food casing as claimed in claim 1 or 2, wherein it has a sigma-5 value (longitudinal/transverse, measured wet) of less than 20/20 N/mm^2, preferably a sigma- % value in the range from 2/2 to 10/10 N/mm^2.

4. The shirred food casing as claimed in one or more of claims 1 to 3, wherein, after shirring, it extends in the longitudinal direction by no more than 15 %, preferably by no more than 10 %, particularly preferably by no more than 5 %, when it is stored on a smooth planar support at room temperature and 60 % rh.

5. The shirred food casing as claimed in one or more of claims 1 to 4, wherein it bends under the effect of its own weight by no more than 20 %, preferably by no more than 5 %, based on the length between two support points, at room temperature.

6. The shirred food casing as claimed in one or more of claims 1 to 5, wherein it is single-layered.

7. The shirred food casing as claimed in one or more of claims 1 to 6, wherein it has a wall thickness of no more than 90 µm, particularly preferably from 15 to 30 µm.

8. The shirred food casing as claimed in one or more of claims 1 to 7, wherein it contains soft synthetic polymers or polymer mixtures, preferably aliphatic polyamides, or aliphatic copolyamides, or polyether block amides.

9. The shirred food casing as claimed in one or more of claims 1 to 8, wherein it is plasticized by at least one monomeric plasticizer, preferably by dimethylsulfoxide, butane-1,3-diol, glycerol, water, ethylene glycol, propylene glycol, butylene glycol, diglyceride, diglycol ether, formamide, N–methylformamide, N,N-dimethylformamide, N,N-dimethylurea, N,N-dimethylacetamide, polyalkylene oxide, glycerol mono-, di- or triacetate, sorbitol, erythritol, mannitol, gluconic acid, galacturonic acid, glucaric acid, glucuronic acid, polyhydroxycarboxylic acids, glucose, fructose, sucrose, citric acid or a citric acid derivative, or any desired mixture thereof.

10. The shirred food casing as claimed in one or more of claims 1 to 9, wherein it has a nominal caliber of no more than 40 mm.

11. The shirred food casing as claimed in one or more of claims 1 to 10, wherein the casing has a water vapor permeability of 5 to 1000 g/m^2 d, preferably 20 to 400 g/m^2 d, particularly preferably 50 to 200 g/m^2 d, determined as specified in DIN 53 122 at 23 °C.

12. The shirred food casing as claimed in one or more of claims 1 to 11, wherein the casing is corona-treated on the outside.

13. The shirred food casing as claimed in one or more of claims 1 to 12, wherein it is closed at one end, preferably by twisting, welding, gluing or by a metal or plastic clip.

14. The shirred food casing as claimed in one or more of claims 1 to 13, wherein the casing is permeable to cold smoke, warm smoke, or hot smoke.

15. The shirred food casing as claimed in one or more of claims 1 to 14, wherein it achieves the required intrinsic stability by a temporary setting of the shirring geometry and the resultant breakdown in tension of the shirred pleats.

16. The use of the shirred food casing as claimed in one or more of claims 1 to 15 on a fully automatic stuffing apparatus, preferably on fully automatic sausage stuffing, portioning, clipping and twisting apparatuses.